

CLAIMS

1. An antenna having multiple radiating bands, comprising:
 - a ground plane;
 - a feed plate extending generally parallel to and being spaced from said ground plane by a first distance and having a feed connection extending between said feed plate and said ground plane;
 - at least one radiating element extending generally parallel to and being spaced from said feed plate by a second distance, and
 - at least one galvanic connector connecting said at least one radiating element at a first location on said at least one radiating element to said ground plane at a first location on said ground plane, said first location on said ground plane being separated from said feed connection by a third distance,

said first, second and third distances being selected to achieve desired impedance matching of said feed plate, and

said feed plate feeding said at least one radiating element at a location corresponding to an impedance substantially greater than 50 Ohm at at least one band.
2. An antenna according to claim 1, wherein said ground plane has an aperture formed therein, and said feed connection extends through said aperture.
3. An antenna having multiple radiating bands comprising:
 - a ground plane;
 - a feed plate extending generally parallel to and being spaced from said ground plane by a first distance and having a feed connection extending between said feed plate and said ground plane;
 - at least one radiating element extending generally parallel to and being spaced from said feed plate by a second distance;
 - at least one galvanic connector connecting said at least one radiating element at a first location on said at least one radiating element to said ground plane at a

first location on said ground plane, said first location on said ground plane being separated from said feed connection by a third distance; and

at least one galvanic connection connecting said at least one radiating element and said feed plate, there being a capacitive and a galvanic connection between said feed plate and said at least one radiating element.

4. An antenna having multiple radiating bands comprising:
 - a ground plane;
 - a feed plate extending generally parallel to and being spaced from said ground plane by a first distance and having a feed connection between said feed plate and said ground plane;
 - at least one radiating element extending generally parallel to and being spaced from said feed plate by a second distance; and
 - at least one galvanic connector connecting said at least one radiating element at a first location on said at least one radiating element to said ground plane at a first location on said ground plane, said first location on said ground plane being separated from said feed connection by a third distance,
 - said feed plate at least partially overlapping portions of at least two conductive arms defined by said at least one radiating element and said at least one galvanic connector.
5. An antenna according to claim 4, and also comprising a dielectric support platform underlying said at least one radiating element.
6. An antenna having multiple radiating bands comprising:
 - a ground plane;
 - a feed plate extending generally parallel to and being spaced from said ground plane by a first distance and having a feed connection between said feed plate and said ground plane;
 - at least one radiating element extending generally parallel to and being spaced from said feed plate by a second distance, and

at least one galvanic connector connecting said feed plate at a first location on said feed plate to said ground plane at a first location on said ground plane, said first location on said ground plane being separated from said feed connection by a third distance,

said first, second and third distances being selected to achieve desired impedance matching of said feed plate,

said feed plate providing inductive and capacitive coupling for feeding said at least one radiating element.

7. An antenna according to claim 6 and also comprising at least one galvanic connector connecting said at least one radiating element to said ground plane.

8. An antenna according to any of claims 3 to 7, and wherein said first, second and third distances are selected to achieve desired impedance matching of said feed plate.

9. An antenna according to any of the preceding claims, and wherein said feed plate comprises a capacitive feed plate.

10. An antenna according to any of the preceding claims, and wherein said feed connection extends from a feed contact pad which is electrically insulated from said ground plane.

11. An antenna according to any of the preceding claims, and wherein said at least one radiating element is formed with at least one slot.

12. An antenna according to any of the preceding claims, and wherein said at least one galvanic connector extends from a ground contact pad which is galvanically connected to said ground plane.